What is Claimed is:

1. A method for the fabrication of a plurality of material systems, comprising the steps of:

a) continuously providing a material system composition comprising at least a first material system component and a second material system component;

b) depositing said material system composition onto a substrate; and

c) analyzing at least one material property of said material system composition, wherein a material property of at least one of said first material system component and said second material system component is varied on a real-time basis such that said material system composition comprises a first material system composition at a first time and a second material system composition at a second time.

2. A method as recited in Claim 1, wherein at least one of said first and second material system components comprises a particulate reacted precursor.

3. A method as recited in Claim 1, wherein at least one of said first and second material system components comprises a particulate reacted precursor and wherein the composition of said particulate reacted precursor is varied on a real time basis.

4. A method as recited in Claim 1, further comprising the step of reacting said material system composition after said depositing step.

5. A method as recited in Claim 1, further comprising the step of reacting said material system composition by heating after said depositing step.

6. A method as recited in Claim 1, wherein said depositing step comprises depositing said material system composition using a direct-write tool.

7. A method as recited in Claim 1, wherein said depositing step comprises depositing a linear feature.

8. A method as recited in Claim 1, wherein said material system composition is a thick-film paste.

9. A method as recited in Claim 1, wherein said material system is a polymer thick-film paste.

10. A method as recited in Claim 1, wherein said material system is an ultra-low fire conductor composition and at least one of said first and second material system components comprises a metal-organic decomposition compound.

11. A method as recited in Claim 1, wherein said first material system component comprises an electrocatalyst and said second material system component comprises a polymer.

12. A method as recited in Claim 1, wherein said first material system component comprises carbon and said second material system component comprises a polymer.

13. A method for the fabrication of a plurality of material systems, comprising the steps of:

a) continuously providing a material system composition comprising at least a first material system component and a second material system component;

b) depositing said material system composition; and

c) analyzing at least one material property of said material system composition, wherein the relative concentration of at least one of said first material system component and said second material system component is varied on a real-time basis such that said material system composition comprises a first material system composition at a first time and a second material system composition at a second time.

14. A method as recited in Claim 13, further comprising the step of mixing said material system composition prior to said deposition step.

15. A method as recited in Claim 13, wherein at least one of said first and second material system components comprises a particulate reacted precursor.

16. A method as recited in Claim 13, wherein at least one of said first and second material system components comprises a particulate reacted precursor and wherein the composition of said particulate reacted precursor is varied on a real time basis.

17. A method as recited in Claim 13, further comprising the step of reacting said material system composition after said depositing step.

18. A method as recited in Claim 13, further comprising the step of reacting said material system composition by heating after said depositing step.

19. A method as recited in Claim 13, wherein said depositing step comprises depositing said material system composition using a direct-write tool.

20. A method as recited in Claim 13, wherein said depositing step comprises depositing a linear feature.

21. A method as recited in Claim 13, wherein said material system composition is a thick-film paste.

22. A method as recited in Claim 13, wherein said material system composition is a polymer thick-film paste.

23. A method as recited in Claim 13, wherein said material system is an ultra-low fire conductor composition and at least one of said first and second material system components comprises a metal-organic decomposition compound.

24. A method as recited in Claim 13, wherein said first material system component comprises electrocatalyst particles and wherein said second material system component comprises a polymer.

25. A method as recited in claim 13, wherein said first material system component comprises carbon particles and wherein said second material system component comprises a polymer.

26. A method for the deposition and analysis of a multi-layer structure, comprising the steps of:

a) depositing a first material on a substrate;

b) depositing a second material over said first material to form a multi-layer structure; and

c) analyzing said multi-layer structure for at least one material property, wherein the composition of at least one of said first material and said second material is varied on a real-time basis such that said multi-layer structure comprises a first multi-layer composition at a first time and a second multi-layer composition at a second time.

27. A method as recited in Claim 26, wherein said depositing steps comprise depositing said first and second materials as linear features on said substrate.

28. A method as recited in Claim 26, wherein said depositing step comprises depositing said first and second materials with a direct-write tool.

29. A method as recited in Claim 26, wherein at least one of said first and second materials is a particulate reacted precursor.

30. A method as recited in Claim 26, wherein at least one of said first and second materials comprises a polymer.

31. A method as recited in Claim 26, wherein at least one of said first and second materials comprises a hydrophobic polymer.

32. A method as recited in Claim 26, wherein at least one of said first and second materials compirses an electrocatalyst.

33. A method for the deposition and analysis of a multi-layer structure, comprising the steps of:

a) depositing a first material on a substrate;

b) depositing a second material over said first material to form a multi-layer structure; and

c) analyzing said multi-layer structure for at least one material property, wherein the ratio of said first material to said second material is varied on a real-time basis such that said multi-layer structure comprises a first multi-layer composition at a first time and a second multi-layer composition at a second time.

34. A method as recited in Claim 33, wherein said depositing steps comprise depositing said first and second materials as linear features on said substrate.

35. A method as recited in Claim 33, wherein said depositing step comprises depositing said first and second materials with a direct-write tool.

36. A method as recited in Claim 33, wherein at least one of said first and second materials is a particulate reacted precursor.

37. A method as recited in Claim 33, wherein at least one of said first and second materials comprises a polymer.

38. A method as recited in Claim 33, wherein at least one of said first and second materials comprises a hydrophobic polymer.

39. A method as recited in Claim 33, wherein at least one of said first and second materials comprises an electrocatalyst.